

CLAIMS

1. A method for use in thermally bonding lubricant over at least a portion of a surface of a magnetic disk, comprising:
5 during a lubricant bonding mode of operation:
reading data from a data block of the magnetic disk;
storing the data in memory; and
repeatedly writing the data back to the data block of the magnetic disk a plurality of N times to generate heat for thermally bonding lubricant over the
10 magnetic disk.
2. The method of claim 1, further comprising:
repeating the repetitive writing of data for an additional data block of the
magnetic disk.
15
3. The method of claim 1, further comprising:
repeating the repetitive writing of data for a plurality of additional data blocks of
the magnetic disk.
- 20 4. The method of claim 1, further comprising:
repeating the repetitive writing of data for a plurality of additional data blocks of
the magnetic disk for thermally bonding lubricant over the at least portion of the surface
of the magnetic disk.
- 25 5. The method of claim 1, further comprising:
repeating the repetitive writing of data for a plurality of additional data blocks of
the magnetic disk for thermally bonding lubricant over the at least portion of the surface
of the magnetic disk; and

wherein the at least portion of the surface comprises an inner diameter (ID) or an outer diameter (OD) of the magnetic disk.

6. The method of claim 1, wherein the data block comprises at least one disk
5 track of the magnetic disk.

7. The method of claim 1, wherein $N \geq 10$.

8. The method of claim 1, wherein $N \geq 100$.

10

9. A computer program product, comprising:
a data storage medium;
computer instructions stored on the data storage medium;
the computer instructions being executable by a processor of a disk drive for
15 thermally bonding lubricant over at least a portion of a surface of a magnetic disk by:
reading data from a data block of the magnetic disk;
storing the data in memory; and
repeatedly writing the data back to the data block of the magnetic disk a
plurality of N times to generate heat for thermally bonding lubricant over the
20 magnetic disk.

10. The computer program product of claim 9, wherein the computer
instructions are further executable for:
repeating the repetitive writing of data for an additional data block of the
25 magnetic disk.

11. The computer program product of claim 9, wherein the computer
instructions are further executable for:

repeating the repetitive writing of data for a plurality of additional data blocks of the magnetic disk.

5 12. The computer program product of claim 9, wherein the computer instructions are further executable for:

repeating the repetitive writing of data for a plurality of additional data blocks of the magnetic disk for thermally bonding lubricant over the at least portion of the surface of the magnetic disk.

10 13. The computer program product of claim 9, wherein the computer instructions are further executable for:

repeating the repetitive writing of data for a plurality of additional data blocks of the magnetic disk for thermally bonding lubricant over the at least portion of the surface of the magnetic disk; and

15 wherein the at least portion of the surface comprises an inner diameter (ID) or an outer diameter (OD) of the magnetic disk.

14. The computer program product of claim 9, wherein the data block comprises at least one disk track of the magnetic disk.

20

15. The computer program product of claim 9, wherein $N \geq 10$.

16. The computer program product of claim 9, wherein $N \geq 100$.

25

17. A disk drive, comprising:

a housing;

a magnetic disk rotatably supported in the housing;

a magnetic head assembly which includes a magnetic head;

a support mounted in the housing which supports the magnetic head assembly so as to be in a transducing relationship with the magnetic disk;
a spindle motor which rotates the magnetic disk;
an actuator positioning device connected to the support which moves the magnetic head assembly to multiple positions with respect to the magnetic disk;
5 a processor connected to the magnetic head assembly and to the actuator;
the processor being operative to exchange signals with and control the position of the magnetic head assembly;
the processor being operative to, during a lubricant bonding mode of operation:
10 cause the magnetic head assembly to read data from a data block of the magnetic disk and store it into memory; and
cause the magnetic head assembly to repeatedly write the data back to the data block of the magnetic disk a plurality of N times to generate heat for thermally bonding lubricant over the magnetic disk.

15

18. The disk drive of claim 17 wherein, during the lubricant bonding mode of operation, the processor further causes the magnetic head assembly to repeat the repetitive writing of data for an additional data block of the magnetic disk.

20 19. The disk drive of claim 17 wherein, during the lubricant bonding mode of operation, the processor further causes the magnetic head assembly to repeat the repetitive writing of data for a plurality of additional data blocks of the magnetic disk.

25 20. The disk drive of claim 17 wherein, during the lubricant bonding mode of operation, the processor further causes the magnetic head assembly to repeat the repetitive writing of data for a plurality of additional data blocks of the magnetic disk for thermally bonding lubricant over the at least portion of the surface of the magnetic disk.

21. The disk drive of claim 17 wherein, during the lubricant bonding mode of operation, the processor further causes the magnetic head assembly to repeat the repetitive writing of data for a plurality of additional data blocks of the magnetic disk for thermally bonding lubricant over the at least portion of the surface of the magnetic disk comprising an inner diameter (ID) or an outer diameter (OD) of the magnetic disk.

22. The disk drive of claim 17, wherein the data block comprises at least one disk track of the magnetic disk.

23. The disk drive of claim 17, wherein $N \geq 10$.

24. The disk drive of claim 17, wherein $N \geq 100$.

25. A method of thermally bonding lubricant over at least a portion of a surface of a magnetic disk comprising:

for each data block of a plurality of M data blocks of the magnetic disk corresponding to the at least portion of the surface of the magnetic disk:

reading data from the data block of the magnetic disk; and

repeatedly writing the data back to the data block of the magnetic disk a plurality of N times to generate heat for thermal lubricant bonding.

26. The method of claim 25, wherein each data block comprises at least one data track of the magnetic disk.

27. The method of claim 25, wherein the at least portion of the surface of the magnetic disk comprises an inner diameter (ID) or an outer diameter (OD) of the magnetic disk.

28. The method of claim 25, wherein $N \geq 10$.

29. The method of claim 25, wherein $N \geq 100$.

30. The method of claim 25, wherein $M \geq 100$.